STATE LEGISLATURE USE OF INFORMATION TECHNOLOGY IN OVERSIGHT

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EXECUTIVE SUMMARY

State legislatures have been implementing automated data processing (ADP) systems at a rapid rate, although there are a few holdouts, especially among the smaller states. Most of the new equipment has been used to modernize traditional legislative functions--bill drafting, statutory retrieval, printing of journals, and vote recording. Attention is now shifting to the utilization of ADP for more substantive purposes such as policy making and oversight. This report reviews some of the progress made by the states in the application of information technology to the oversight function

Oversight refers generally to efforts by the legislature to influence or control the activity of the executive branch. Political scientists agree that it is impossible to separate sharply oversight from other business performed by legislators, whether as a whole, as a committee, or as individuals. For purposes of this analysis, we identified in the literature several elements that should go into a preferred model of legislative oversight. Among the major features of the model:

1. Oversight should be representative of the interests of the largest possible number of legislators;

2. Oversight should be performed on a regular basis;

3. Oversight should come after the fact to avoid unnecessary interference with the legitimate conduct of adminstration;

4. Oversight should be centralized to provide for the most comprehensive perspective on the operating of the executive branch;

5. Oversight should be based on information derived from sources independent of the executive.

The ideal system of oversight would then feature a centralized structure, using independently obtained information, which would permit the legislature, on a regular basis, to make collective judgments about the propriety or impropriety of administrative actions, after those actions have been concluded. In all of this, the legislature should be assisted by the most productive information technology available.

To test this model, we selected nine states for closer scrutiny. In an attempt to see whether it was the renewed interest in oversight or the availability of powerful new technologies which came first, we distinguished among states on the basis of the relationship between the executive and legislative branches. Specifically, we used measures of administrative sophistication in government and the effectiveness of gubernatorial authority over executive agencies. Some adjustments were made in our selection at the request of the Office of Technology Assessment. Three states--California, New York, and Wisconsin--were identified as having highly professional legislatures and powerful governors. Minnesota, Washington, and Florida were placed in a middle group. Finally, Texas, Virginia, and South Dakota were regarded as states having low professionalism and weak governors, although

this classification contains some questionable cases.

We then conducted telephone interviews in November 1984 with the relevant legislative staff officials to ask about the status of oversight in their states and how informational technology has affected the function. Our inquiries were generally directed toward five major areas which have the greatest potential for oversight: budgeting, post auditing, program evaluation, rules and regulations review, and administrative behavior.

Findings

The states are involved in a variety of oversight activity and information technology has made a difference in most cases. However, there is little deliberate movement toward our model. More specifically:

1. Oversight still tends to involve only a small minority of legislators;

2. Oversight is not likely to take place on a regular basis, although Washington has made the most progress toward this end.

3. Most oversight, so far as we could tell, does take place after the fact, with a major exception being those states in which the legislature has traditionally played a strong role in the budgetary process.

4. There has been a tendency to centralize ADP systems and thus the resulting oversight is also concentrated in central offices. However, the widespread introduction of micro computers is going to change this trend.

5. Most legislators are satisfied with the information obtained from the executive agencies and there is, except for New York, little interest in establishing separate data bases.

We did not find much evidence to support the idea that legislators are taking an active part in the design of an overall strategy for future oversight. The availability of technology is probably more important for

developments in this area than the conscious decision of the whole body. The degree of profesionalism in legislative staffs is an important determinant of how the information technology will be acquired and utilized. Enough experimentation with ADP has taken place in the more advanced states that it is relatively easy for other states to catch up through the wholesale implementation of new technology.

In terms of specific areas of oversight, the introduction of technology has been unbalanced. Budgeting, an area which has always been information-intensive, has changed the most because of ADP, at least superficially; legislators and their staffs are able to manipulate more data than ever before but we are unable to say whether this improved capacity has necessarily led to better decisions about expenditures. Program evaluation and post aduiting have also been upgraded in several states through ADP. Rules review is a popular suggestion for oversight, but information technology is not absolutely central to this function. The collection of information about aberrant administrative behavior is still at a rudimentary stage in all states.

Generally, state legislatures have passed a major threshold in the adoption of information technology with the automation of their internal operations. The oversight function, however, has tended to develop somewhat haphazardly. The point of diminishing returns will soon be reached unless legislative leaders reevaluate what they want to accomplish in this area. The disjointed expansion of legislative capacity in areas most amenable to ADP will not necessarily lead to a comprehensive process of review of the activity of state government. What needs to be done is the elevation of oversight to the status of a widely accepted responsiblity for all members. The leadership of the various houses will have to determine just what it is that

their members need to know and then adapt the appropriate technology. Only with that foundation will the staffs, in almost all cases highly competent and professional, be able to channel their energies into more prooductive directions.

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STATE LEGISLATURE USE OF INFORMATION TECHNOLOGY IN OVERSIGHT

INTRODUCTION

Since legislatures are institutions designed to process large amounts of information into decisions about public policy, one might have assumed they would be on the forefront of the application of new technologies. Although there are vast differences among the states, overall the legislatures have, until recently, been cautious innovators. This is not so surprising since legislatures, as collegial organizations, tend to be conservative and devoted to tradition. Moreover, their members are masters at politics and changes in structure or procedures are likely to be evaluated in terms of their payoffs for themselves or their constituents. Legislative leaders used the existing rules of the game to win their positions and so are disinclined to change things too radically. Even so, no organization can ignore the revolution in information technology, including computers and telecommunications, and legislatures, with varying degrees of enthusiasm, have joined the movement.

Stucker (1982: 330) summarizes the direction of legislative applications on information technology: " The literature reviewed suggests that development of legislative information technology has followed a clear pattern. In almost every instance, the initial applications created support legislative and internal administrative functions, such as voting, bill status, bill drafting and code revision, committee calendars, payrolls and office accounts, and correspondence. Only after these initial systems have been successfully implemented do most legislatures develop decision-assisting and policy analysis applications." The legislators, in short, were initiated into the mysteries of the computer through the automation of their in-house routines,

from recording their votes to publishing proceedings. In the process, they may have saved themesleves from being overwhelmed by the minutia of legislating. In the view of Glenn Newkirk, former Director of Legislative Information Services for the National Conference of State Legislatures, most states are now far ahead of Congress in many basic areas, although Congress may have an advantages in automated systems directed toward handling constituent contacts. The states are now ready (and in some cases eager) to go beyond this initial effort and expand their capabilities in more important areas. In particular, Automatic Data Processing (ADP) is seen as a means of collecting, processing and storing large amounts of information necessary for the making of public policy. It also promises to open up new possibilities for overseeing the operation of the executive branch. This report will concentrate on to what extent the oversight function of state legislatures is being revived through ADP.

There is widespread agreement about the virtues of legislative oversight in democratic societies. However, any warm glow is quickly dissipated by questions about what it really involves or, more disconcerting, how to do it. As Rockman (1984: 414) notes, the subject of oversight has its own literary rituals, with writers insisting that it is important and that more ought to be known about it. The vagueness of the concept may account for the popularity of the most widely quoted definition of oversight in political science, namely, that of Morris Ogul (1976: 11): "Oversight is defined as the behavior of legislators, individually or collectively, formally or informally, which results in an impact on bureaucratic behavior in relation to the structures and processes of policy implementation." In that sense, an oversight component can be read into just about everything a legislature does or does not do.

The renewed interest in oversight in the past decade has been attributed to everything from a post-Watergate disenchantment with executive power to the rise of a "new breed of legislators. But surely one of the most powerful causes is the emergence of an information technology with the potential for making comprehensive oversight feasible. Because of the computer revolution, legislators may believe that it is now possible to gather significant data about what really goes on within the bowels of the bureaucracy. They can now put together the disparate parts of the administrative mosaic and learn whether government is performing in a satisfactory manner. The information needed for oversight can be, so it is thought, acquired, manipulated, and stored in a cheap and timely manner.

TOWARD A MODEL OF OVERSIGHT

Ogul's definition includes just about everything except the answers to a number of "ought" questions, but it is a normative model we need if we are to make sense of what the several states are doing. That is, what should legislative oversight look like? If we can resolve that question, then we can analyze better the activity going on at the present time. The model presented here is admittedly value-laden, but it is supported by the literature. The picture of "good" oversight is composed of several elements.

1. In whose name is oversight done? Simply put, is oversight representative of the preferences of the entire legislature or is it the result of uncoordinated actions by individual legislators and committees? Ethridge (1981) makes the distinction between "true oversight" and "intrusive access." In true oversight, it is assumed that "legislative participation can be significant in its control of the direction of overall policy and that it reflects general legislative preferences." At the other extreme, intrusive

access may be merely the sum total of individual contacts with the administration. Such contacts may be highly unrepresentative of the general policy goals of a majority of legislators. For example, the legislature as a whole may be quite satisfied with the activity of a particular bureau, but one maverick legislator can make life so miserable for the agency's administrators that they modify their behavior to pacify this loner. In this study, it will be assumed that oversight should reflect the will of the largest possible group of legislators. In this area, the application of information technology could be the best way for converting "intrusive access" into "true oversight;" that is, the random inquiries of individual legislators can be aggregated into significant findings about a particular agency. Fifty legislators, for example, may receive complaints about actions of the State Bureau of Widgets but as long as they remain isolated from each other, all these complaints may not be collected into a clear picture of the operations of the bureau.

2. How should oversight be performed? Should oversight be a regular routine of the legislature or should it be geared toward the investigation of sporadic outbreaks of administrative error? McCubbins and Schwartz (1984) distinguish between "police-patrol" and "fire-alarm" oversight. Police-patrol oversight is centralized, active, and direct; ideally, it covers the entire "beat" of the legislature, including both the innocent and the not-so-innocent agencies. The fire-alarm version is intended to pick up complaints from the public about questionable administrative activity; this oversight is never used if the bureau does not inspire anyone to pull the alarm. Legislators engaged "in police-patrol oversight inevitably spend time examining a great many executive branch actions that do not violate legislative goals or harm any potential supporters, at least not enough to occasion complaints"

INTENTIONAL
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(McCubbins and Schwartz, 1984: 168). Given the existing capacity of most legislatures, the police-patrol version can probably take account of only a small sample of all executive branch activity, and the fire-alarm type may be more cost-effective. However, at least some authorities see police-patrol oversight as being attainable, and the General Accounting Office (GAO, 1981: 4) recommended that "oversight reform legislation should establish a review process as universal in its coverage as possible." The best way to achieve universality, according to the GAO, is through better analysis of proposed legislation, stronger program evaluation requirements in legislation, and more intensive scrutiny of program design. All of these features are enhanced by improved information technology, so the police-patrol variation of oversight may be feasible.

3. When should oversight take place? To be sure, there is a fine line between legislative interference in executive prerogatives and legitimate oversight. However, scholars agree that oversight should be post hoc. Writing of Congress, Schick (1976: 519-20) says, "the dominant feature of legislative oversight is review after the fact." Rosenthal (1983: 96) agrees that oversight is properly restricted to the review of actions of administrators since "policy, not administration, is essentially the legislature's business." The great potential (or threat) of modern information technology is that legislators will receive administrative data at the same time--or even before--as the executives and then pressure officials to respond to that data in a particular way. In those cases, it might be accurate to say that the legislators are "doing" rather than "overseeing" administration. Of course, the denial of "real-time" data to legislators might be seen as an infringement upon their right to anticipate emerging problems. On the whole, we believe it is preferable for legislators

to review what has been done and to encourage the executive branch, through whatever means, to change any unacceptable conduct.

4. How should oversight be implemented? If oversight is becoming a major function of state legislatures and if information technology is being applied to support that function, one might argue that the traditional internal structures must be changed drastically. In view of Simons' (1979) findings that the organizational and staffing patterns in state legislatures are highly fragmented and in view of the desideratum that oversight be reflective of the will of the legislature, it is postulated that oversight should lead to greater centralization. Information technology should be accompanied by a change in existing structural arrangements so that a more comprehensive review of administration is possible. In the worst case, the acquisition of incompatible technology by the various power centers in a legislature may serve to inhibit communication within the whole body. Centralization, however, does not imply monopolization of oversight information by the leadership or particular committees. In the ideal situation, all members would have access to a central source of informatioon about the operation of the state.

5. What information is needed for oversight? If oversight is to be a form of independent assessment of executive actions, it is imperative that the legislature have access to independently derived information. We are not so naive here to believe that somewhere in space is an abstract truth in all its pristine beauty that can be discovered if enough data are collected. As Stockfisch (1971) pointed out, organizational information, especially in government, is the result of a complex set of interactions among political actors. Data produced by agencies may not be false, but there is no guarantee that it is "true" in any universal sense. If Altheide and Johnson

(1980) are correct, whatever is presented by the agencies will probably reflect their particular view of reality. It is therefore necessary that outside auditors, including the legislature, have an independent source of information. The alternative information may be no closer to the truth, but at least it will be different which, in the world of organizational "impression management," is the most one can strive for.

The model we will use to measure the systems now existing in the nine states studied in this project is derived from the answers we have given to the questions above. The ideal system of legislative oversight would feature a centralized structure, using independently obtained information, which would permit the legislature, on a regular basis, to make a collective judgment about the propriety or impropriety of administrative action, after those actions have been concluded. In all of this, the legislature would be assisted by the most productive information technology available. It now remains to see how closely states approach this ideal and, more important, to identify the reasons for any movement toward or away from the ideal.

THE STATES SELECTED

Nine states were chosen for careful scrutiny to measure the amount and direction of movement toward the application of information technology in the oversight function. We began our identification of states with the notion that oversight was a significant element in the relationship of the legislature to the executive branch to different degrees in different states. The emphasis on oversight and the nature it took would depend to an extent upon the perception of the legislature about its relative power position within the state.

In taking this approach we in effect bracketed the idea that upgrading the oversight capacity was somehow independent of the state's political process. Put another way, it was hoped that one could distinguish the mindless acquisition of advanced technology from a renewed interest in oversight. It is imaginable, if not probable, that the legislature was in firm control of the application of technology through a process whereby a conscious policy on the part of legislators would determine the choice of technology to meet specific needs. If improved technology was regarded as part of a deliberate strategy for dealing with the executive branch, with a clear vision of the potential outcome, it seemed to us likely that the choice of means or the perceived need for information would depend on the historical relations of the body with the administration.

Now to be sure, this approach does demand a leap of faith, since political scientists are fairly unanimous in their conviction that oversight is easier said, by the legislature, than it is done. Most legislators are no doubt sincere in their dedication to the principle of oversight but the American political process does not tend to reward the activity itself. As Ogul (1981: 329) found in Congress, "the incentives for conducting more intensive and extensive oversight are great in the abstract and modest in many concrete situations. Any analysis of legislative oversight has to be grounded in this reality." Whether or not the present analysis is so grounded, we are still convinced that the balance between legislature and executive is at least a reasonable starting place.

We originally thought it would be worthwhile to distinguish states on the basis of the formal strength and weaknesses of the legislature in relation to the executive. It soon became evident, however, that measures of capacity are useful for making distinctions among states but not for analysis within

states. Particularly with measures of the use of information technology, there are likely to be sharp differences between the most advanced and the most backward states, but one is not likely to find a state within which the executive branch is advanced and the legislature is backward (or vice versa). As Crane (1977: 140) notes, the legislature and the executive are not involved in a zero-sum relationship; therefore, "a strong executive is not a barrier to legislative program review capability. It is consistent with the view that states which seek strong government take measures to strengthen both the legislature and the executive." Our major criterion for selection of states then became what we call "administrative sophistication."

Our measure of administrative sophistication combines the elements of legislative professionalism and gubernatorial powers. We believe professionalism is the prerequisite for the extensive use of oversight techniques by the legislature. The construct of professionalism includes such variables as the outlay for legislative staffing, the length of sessions, legislative salaries, and the scope of legislative services. To update the professionalism scale devised by Grumm (1970, 1971), three measures from the original index were replicated with 1984 data (annual salary, calendar days in the session, and number of bills introduced). Our results coincided with Grumm's ranking of the states, so we feel comfortable in continuing to use it as a measure of legislative professionalism. Legislatures, Grumm found, are more active in determining expenditure levels and evaluating programs if they are more professional. The index seems a reliable measure of the involvement of the legislature in administration.

The formal powers of a governor are taken as indicative of state capacity for the delivery of government services, especially since the measure we are using (Beyle, 1983) includes the power given the governor by the

legislature to reorganize the state bureaucracy. In general, gubernatorial power is a sign of the overall attention given to administrative matters by a state (which should precipitate more involvement in oversight activities). Beyle's index of power includes five variables: tenure potential, power of appointment, budget authority, veto power, and control over administrative reorganization. The scale ranges from a possible 5 points to 25, with the actual range being 10 to 25. Since so many states fall in the upper range of the scale (20 states have scores of 21 or more), dividing the scale into thirds was not advisable. We ranked states according to whether governors had more or less formal power.

Formal powers, of course, do not tell us exactly how active a governor is in controlling the executive branch. Therefore, we augmented the Beyle scale with data derived from Abney and Lauth (1983). In their study, they asked department heads to rank, from a list of seven actors, who had the most influence on department programs and objectives. On this scale, states ranged from Maryland, where 91 percent of department heads felt the governor was most influential, to Colorado and South Carolina where no one ranked the governor as most influential. These scores, together with the Beyle scale, give us some idea of the formal power together with the attention paid to the governor by supposed subordinates. A state such as New York in which the governor apparently makes use of considerable formal authority is not the same as Virginia where a formally weak governor is not regarded by administrators as important in the conduct of state business. We believe, further, that the overall powers of the governor are an indication of a state's proclivity to try new methods to control implementation activity; gubernatorial powers are indeed correlated to state innovation scores (Walker, 1972).

Another dimension in our selection process was the state's familiarity

with information technology. The latest data on ADP applications from the Book of the States were checked to make sure that states chosen had advanced beyond the most basic uses of information technology. Finally, adjustments were made in our selections, at the request of the Office of Technology Assessment, for greater coordination with other studies in the current research effort.

We considered the nine states as falling into three groups(see Table 1). The first group--California, New York and Wisconsin--are regarded as the most administratively sophisticated. Legislative professionalism is high and the governor is relatively powerful. Minnesota, Washington and Florida are states in which both legislative and gubernatorial capacity are moderately developed. The final group--Texas, Virginia and South Dakota--is more of a mixed bag. Texas is high in legislative professionalism and very low in gubernatorial power. South Dakota has a formally powerful but practically weak governor with a legislature scoring low in professionalism. Despite these anomalies, we see this group as the least developed in administrative capacity.

A dissenting view of our selection process would say that we have placed too much reliance on the view that political leaders within a state are autonomous actors and that they have the ability to reshape their respective branches as self-contained entitites. In reality, so it could be said, the officials are more accurately regarded as products of the political culture that encourages or discourages innovative policies. That is, California is not a leader in the appliction of ADP to government because of conscious decisions made by the state's political leadership. Rather, the state's leadership is a product of a political style which promotes technological innovation; leaders are not so much in charge of things as they are carried along by the crest of the wave of innovation.

TABLE 1

STATES SELECTED FOR STUDY

	Legislative Professionalism (Rank)	Gubernatorial Powers (Score)	Gubernatorial Authority (Abney & Lauth)	Number of ADP Applications
California	1	22	60%	19
New York	3	24	69	13
Wisconsin	9	19	47	19
Minnesota	20	23	38	13
Washington	22	17	42	9
Florida	15	18	20	18
Texas	10	11	15	13
Virginia	38	11	12	13
South Dakota	41	22	17	10

*Twenty-two possible applications of ADP were listed in the three categories of statutory, bill systems, legal applications; fiscal, budget, economic applications; and legislative management.

In their study of innovation and its diffusion, Downs and Mohr (1976: 700) say that "perhaps the most alarming characteristic of the body of empirical study of innovation is the extreme variability among its findings." However, there have been sufficient investigations to substantiate the claim by Walker (1969: 887) in his seminal work that "change and experimentation are more readily accepted in the industrialized, urban, cosmopolitan centers of the country..." We will return to this possible explanation for the application of knowledge technology in our concluding remarks.

THE INTERVIEWS

After identifying the subject states, we conducted telephone interviews in November 1984 with the relevant legislative staff officials. The agencies were those named by the Book of the States as having responsibilities in the following areas: electronic data processing, administrative rules, administrative management, post-audit, research and policy analysis, and fiscal review and analysis. In some cases, directors of the exeuctive branch data processing operation were also contacted. A list of the offices contacted is in the appendix. We did not expect to find some totally new phenomenon called oversight nor did we anticipate any "gnomes of the statehouse" with their electronic cosmic eye peering into every action of the state. It is unlikely that oversight will ever be anything more than legislators asking administrators "What's happening?" Thus we concentrated our efforts on those specialized service units which, historically, have been regarded as being basic to oversight. These included the following:

A. Budgeting--Activity related to the "power of the purse" is probably the oldest and most intensive form of oversight. All the states surveyed had specific committees to deal with appropriations. The staffs associated with

such committees have long experience with checking the reliability of executive requests. Traditional fiscal information is very important here, but some states have added features to the budgetary process such as economic impact statements, fiscal notes, and versions of zero-base budgeting. Most of these features require an ability on the part of the staff to manipulate enormous amounts of data.

B. Post-Audit--A number of states have transferred the traditional post-audit function from an independently elected official to a person appointed and supervised by the legislature. The auditor handles fiscal compliance audits to make sure that money has been spent as appropriated. Performance audits and program evaluation are recent additions to the auditor's function in a growing number of states. These approaches attempt to ensure that programs are administered efficiently and that policy goals are being attained.

C. Program Evaluation--Although often associated with the auditing function, program evaluation in some states is an indepenendent activity (Brown, 1984). Evaluation in an integral part of the sunset approach to oversight and those states using sunset usually have the review of agencies administered by a separate staff. Evaluation may also be a tool used by general legislative research officies.

D. Rules and Regulations--States have been experimenting with a variety of ways to review administrative rules and regulations promulgated by agencies. As of 1982, 41 legislatures used some method for reviewing agency regulations and 29 states gave to the legislature the power to veto, suspend, disapprove or delay implemntation of a regulation (Jones, 1982).

E. Administrative Behavior--This category includes some of the oldest forms of oversight but it is also an area which has changed little over the

decades. We are speaking here of the complaints directed by citizens to their representatives about the bureaucracy. These complaints may be about a surly clerk, a state car parked in front of a sleazy dive, or the refusal of an administrator to sympathize with the client's plight. Elling (1979) found that casework achieves some of the objectives of oversight but it has drawbacks. Its effectiveness might be improved by some method of aggregating all the individual contacts. Frantzich (1982) sees the potential for compiling complaints to give legislators a better insight into the source, extent and variety of problems. Those states with an independent ombudsman may have valuable data in a central place; Nebraska's ombudsman has a computer program to flag administrative "hot spots" based on analysis of individual complaints. In another attempt to regularize this process, the state auditor of California advertises a toll-free hotline which can be used by citizens who believe they have information about any sort of administrative hanky-panky.

Any of these areas of oversight could conceivably be strengthened by the application of advanced information technology. Our survey of the states was aimed at learning how such applications have been made. From this we may, it is hoped, understand the nature of current oversight practices as well as predict future developments.

CALIFORNIA

Everything was up-do-date in Sacramento, but recent developments have cast some doubt on the future. Even with the glitches, however, California remains a leader in the legislative application of electronic data processing.

According to the Data Processing Divison of the Office of Legislative Counsel, the state has the most advanced, integrated legislative ADP system in the country. It went into effect in 1981 under the leadership of Assembly Speaker Willie Brown, moving the internal operation of the legislature from a manual system to a fully modernized legislative office system separate from the executive branch. An IBM mainframe is accessed through 600 terminals and 300 printers located in member, committee, and staff offices. The system provides information on bill status to members; all office activity is automated, with electronic mail and electronic filing in place. All basic legislative work, from bill drafting through printing, is handled by the system.

Our contacts would not divulge the pricetag for the system and assured us that we would find no one who would comment. One can assume, however, that cost was no impediment to implementation, and thus it probably came as a shock when the voters approved Proposition 24 in June 1984.
This statutory initiative
was an assault on legislative prerogatives and, among other things, required that legislative spending be reduced by 30 percent below the level for the current year. Although court battles over the measure are still in progress, there has been a funding cut and pay freeze for the staff. Plans for the extension of the automated syatem--e.g., placement of terminals in district

offices of the members--have been postponed. More threatening to the system was the departure of some ADP staff to the executive branch. The uncertainty surrounding Proposition 24 has put information technology on hold.

The data processing system was not specially geared to oversight issues. The center of the oversight process--as well as of a number of other critical government functions--is the California Fiscal Information System (CFIS). A September 1984 document prepared by the Department of Finance, A Review of the California Fiscal Information System, provides a history of CFIS and makes recommendations for its future. In 1977 and 1978, legislators began expressing interest in better fiscal information and control, along the lines of Washington's Legislative Evaluation and Accountability Program (LEAP). A bill which went into effect on January 1, 1979 established CFIS "as a total seven- to ten-year project to provide better fiscal information to decision makers of both the Legislative and Executive Branches" (Department of Finance, 1984: 5).

CFIS is a complex and ambitious project, involving several types of fiscal information. The primary element, the "CFIS database," includes information available only to the executive as well as data shared by the two branches. For oversight purposes, the most important component is "departmental fiscal." This information is "a summarization of departmental accounting information and higher level fiscal information originally identified as needed by decision makers in the Legislative and Executive Branches" (Department of Finance, 1984: 10). One staff member informed us that legislators had been told that they would have easy access to such information as the magazine subscriptions held by a particular agency. The original CFIS design also contained a component of "performance measures," e.g., program size, client characteristics, workload, productivity, and outcome of program

results. Further study found this information was not perceived by potential users as "useful or used, timely or dependable, accessible or efficient" (Department of Finance, 1984: 18) and was dropped. State agencies may still collect such data on a decentralized basis.

The CFIS data base is created through the California State Accounting and Reporting System (CALSTARS). CALSTARS was implemented in 1981-82 and now covers 82 separate state departments. Eventually, every agency will be part of the uniform statewide accounting system.

The 1984 survey of CFIS came to the conclusion that the system was underused by executive and legislative decision makers. In particular, the departmental fiscal component had minimal use and the legislative staff "unanimously indicated that decisons were not made based on the detailed data in this component" (Department of Finance, 1984: 28). Among the complaints, the data were too detailed, not timely enough, and inappropriate for the level of decisons made by the legislature. Since the full implementation of CALSTARS has been delayed, useful statewide information, such as general fund totals, did not seem to be immediately forthcoming. The Department of Finance has thus recommeded that the departmental fiscal component be eliminated from the CFIS data base.

Our conversations with the legislative staff confirmed the low level of CFIS usage in making legislative policy. In the view of some, CFIS was really set up for use by the Department of Finance and legislative applications were something of an afterthought. In any event, Governor Deukmejian has asked for cutbacks in further implementation of CFIS and CALSTARS. In light of its generally disappointing performance, it remains to be seen whether the suggested improvements will redeem the system. It did not appear to us that the legislative staff would regard the collapse of CFIS as a

disaster.

Budgeting: During his long tenure as legislative fiscal analyst, A. Alan Post built his office into the most respected budget-review agency in the country. After his retirement, the tradition continues. The 60 to 70 professional staff members work on the analysis of the governor's budget recommendations. Detailed review of agency requests are made on an ad hoc basis, but the analysis is not purely quantitative. In fact, California probably relies less on sheer number crunching than other states, with the actual method of analysis depending on the situation.

The staffs of the Senate and Assembly finance committees agreed with the legislative analysts: computers have not opened up new dimensions of their work; ADP has only supplemented a system of review already in place. Much of the work of budget review has to be done by routine, given the size and scope of state government. Hot spots are handled on a case-by-case basis.

Post-Audit: The auditor general serves under the Joint Legislative Audit Committee. The office conducts financial compliance audits as well as program and performance auditing. A small ADP staff provides technical support to the auditors; the office now has about 30 microcomputers. The auditor responds to requests for investigations from individual legislators after they have been reviewed by the Joint Committee.

Program Evaluation: Program evaluation is conducted largely by the legislative analyst and the auditor general. As indicated, computers have been helpful in this area, but their use has not changed the nature of this sort of review. Analysts are assigned permanently to specific groups of agencies and their reports are based largely on personal knowledge gained over a long period of time about the bureau under view. California does not have sunset legislation on a widespread basis.

Rules and Regulations: The Office of Administrative Law is an independent executive agency. In California, the processing of proposed administrative rules does not involve any review by the legislature.

Administrative Behavior: A division of the auditor general's office is concerned with "investigative auditing." An 800-number hotline is available for citizens to report suspected improprieties by state employees. In the past four years, the six-member section has received from 4,000 to 5,000 calls. About ten percent of these were regarded by the analysts as serious enough to require further investigation.

NEW YORK

The principal actor involved in oversight in New York is the legislative post auditor, a post created by the legislature due to the frustrations of attempting to gain cooperation from a separately elected controller, the financial auditor for the state. The new position was created in 1969, making New York an early innovator in legislative oversight. Over the years the auditor has expanded the meaning of oversight from the mere examination of financial records to include program and performance auditing.

The entire legislature in New York is said to be interested in oversight activities, especially the younger, more progressive members. Thus, while oversight activities are concentrated in the various committees, there is an overall interest in the function as it can help legislative decision-making. The legislative staff is also quite involved in oversight. The staff is one of the largest in the country (approximately 4,000 staffers), and also one of the most sophisticated. Therefore, when oversight was introduced to the staff, they were comfortable with the necessary procedures to conduct performance and program audits. In addition, the staff is quite comfortable with the new procedures inherent in the introduction of modern information technology.

The information needed for oversight in New York includes more than mere budget data, given the objectives of increasing agency efficiency and effectiveness. Some notions of program accomplishment are necessary to achieve those objectives. Data are needed concerning the functions of personnel within agencies, the use of equipment by agencies, and the extent to which the services assigned to the agency are actually performed (and some measure of the quality of the performance). Some of the data has been difficult to access due to agency reluctance to provide it (either for reasons of confidentiality or because managers feel vulnerable to criticism if it is

released). In some cases, errors are made in the manner in which data are recorded.

Information technology, though, has helped to overcome problems of reliability in the data used by the legislature and its staff. The technology has increased the volume of data directly accessible by legislative staff, constraining the opportunities for agencies to manipulate the data before giving summaries to the legislature. Linkages with executive agencies have improved because legislative staffers can peruse existing data and make their requests for supplemental information quite specific.

Staffers are also able to analyze the data they receive through the use of appropriate software packages. New York is one the few states using social science statistical software to analyze raw data (they use the Statistical Package for the Social Sciences - SPSS). They also use spreadsheet and word processing software to make presentations of oversight findings to legislators. New York is also an atypical case among states because its computer hardware is linked through inter-terminal communications networking to the mainframe computer of the State University in Albany, with access then to the greater computer capacity of the State University System (as well as the consultants at the University). The equipment in New York includes Xerox computers for word processing and Wang terminals for data analysis.

In summary, New York has been interested in oversight activities. Having committed itself to independent analysis of agency activities in 1969, the legislature has consistently promoted increased sophistication and thoroughness in oversight activities. This norm has continued through the introduction of information technology, making New York a leader among states, especially in its use of social science statistics to assess the efficiency

and effectiveness of executive agency operations.

Budgeting: Reports generated by the staff of the Legislative Commission on Expenditure Review are approved by the Commission members (among them are ten members from each House of the legislature) after appropriate review and modification. The Commission then officially issues the report, giving it considerable weight in future legislative deliberations (especially since the Commission includes members of the appropriations committees). In fact, the "clout" of the oversight review documents comes from a legislative history of making appropriations based on oversight reports and attaching the review documents to the changed appropriations to make the linkages very clear to the agency involved.

Technology has been particularly important in the oversight activities related to budgeting. Remote terminals (Wang) allow access to budget data stored in the mainframe computer. The legislative analysts access the executive budget through the terminals, and the increased volume of data makes it more difficult for executive agencies to "massage" the data in order to present more persuasive arguments to the legislature. In this regard, there are said to be "better linkages with information stored in the exectuive branch," and it is easier to know what to look for through the use of the terminals.

Oversight has contributed to some centralization within the New York legislature. This is especially evident in the central role of the Legislative Commission on Expenditure Review. Through that commission, the members of the approrpiations committees obviously exercise tremendous power. They have the first chance to review and modify the reports before anyone else sees them. Since the reports are used in forming judgments concerning appropriations and since money is the lifeblood of any program, the twenty

legislative members of the Commission obviously have a great deal of clout concerning the future of programs in New York.

On the other hand, the widespread availability of budget data, and later other data related to program performance (such as personnel data), does serve to spread somewhat the power that comes with review of an agency's activity. Again, the educational background of the large staff explains increased use of oversight activities. The staff hired within the last ten years or so is especially likely to take advantage of the available data in advising their respective legislators and/or committees.

Post-Audit: Post audits are requested by legislative committees on an ad hoc basis. Information technology has given the legislature and its staff the ability to conduct oversight activities on an ad hoc basis. Computer terminals located in key offices (the commissions, committee staff) enable interested parties to examine budget information and legislative bills (passed and pending). Thus, post auditing is not a centralized function done on a routine basis a la sunset. Instead, it is performed on an as needed basis for specific purposes. This may make the function all the more meaningful to those being audited as well as to the legislators acting on the basis of audit findings.

Program Evaluation: Oversight in New York is a post hoc review of programs and expenditures. The principal objectives of the activity are to determine the efficiency and effectiveness of agency programs. The legislature is not known to be management-oriented, and is therefore not interested in monitoring ongoing agency functions. Instead, the legislature is, through oversight, attempting to hold executive agencies accountable both financially and programmatically. Thanks to the increased sophistication of both staff and legislators, data sources are not restricted to whatever the

executive agencies might make available. This is especially critical in examining the functions of human service agencies, because directors of those programs have been reluctant (in some cases to the point of refusing) to release data concerning cases, ostensibly to protect confidentiality vis a vis the clients. In such cases, as well as at other times, the legislative staff has assembled their own data through the use of user surveys and file searches.

Much agency generated information is available to the legislature during oversight. Of particular note are sources of case information concerning service delivery. Two leading illustrations of this source are data concerning cases in the mental hygiene program and data related to leasing arrangements with private providers of services. Agency data contained in the budget are also freely available and easily accessible.

Once again, the use of advanced software has been particularly helpful to the staff conducting oversight activities, in this case program evaluation. Through the use of computers the staff are able to create their own data bases by either coding their own data (surveys, file searches), or retrieving agency data, or combining their own data with agency generated data. Once the data are coded, they can be analyzed through the use of the Statistical Package for the Social Sciences (SPSS). Results of the analysis can be displayed using the graphs generated by SPSS (including bar graphs and scatterplots) or by reshaping presentations of data through the use of spreadsheets. In short, the quality of program evaluations has improved thanks to information technology. More sophisticated analysis is possible, and the presentations of results can be made more easily understood.

Rules and Regulations: While not having specific sunset review powers or legislative veto power over regulations, New York does engage in review of

administrative rules and regulations. Authority concerning those regulations, though, is limited to advisory opinions, "jawboning, public hearings, and letters from committee chairpersons." A Regulations Review Commission receives any pending rules before they are promulgated in the State Register. The commission reviews the regulations by "looking for compliance with legislative intent, the cost to government, the impact on those regulated, and the procedural compliance."

The information necessary for an effective review of rules and regulations is not yet automated. Agencies provide two documents during the review process, a regulatory impact statement and a rate flexibility analysis for small business. Legislative staff provides assistance in determining legislative intent in passing the statutes that determine regulatory authority. While no computers are used now during the process, the state is scheduled to adopt a reserach package with the ability to retrieve relevant statutes and regulations. Currently all searches for relevant regulations and laws are performed manually.

Administrative behavior: No specific provisions were found in New York for monitoring administrative behavior, particularly since the legislature is not known to be management-oriented. However, the legislature uses oversight on an ad hoc basis to review any administrative behavior they may find especially repugnant.

WISCONSIN

Although Wisconsin was one of the pioneers in the 1960s in applying information technology for bill drafting, bill tracking and statutory retrieval, the state has apparently fallen behind others in the development of legislative systems. However, the override of the governor's veto of the 1979 appropriations bill for the legislature signified a renewed commitment to the expansion of automated information systems. The aspects of the bill that the governor cited in his veto message were the concerns expressed by his staff regarding the legislature's stated intention to monitor more closely agency rule making and the cost of increasing the legislature's computer capacity. The legislature still only shares in the use of the executive branch computers--an arrangement found unsuitable in some similarly sized states--but since it is one of the heaviest users, the legislature is accorded some voice in the mangement of ADP. This is an improvement over the original arrangement in which the Department of Administration had exclusive control.

The Joint Legislative Organization Committee manages the internal use of data processing. The current policy is that the five service agencies of the legislature (and the joint committees supervising them) are to be the major recipients of the data the system generates. These divisions are: Legislative Audit; Fiscal; Reference Bureau; Legislative Council; and Administrative Rules Clearinghouse. The other standing committees, leaders, and members have, at best, a limited opportunity to benefit directly from the increasing volume of electronically generated and stored data. This seems to be the result of a lag in the dispersing of computer technology throughout the legislature or, conversely, a reaffirmation of an earlier policy to keep legislative resources centered in the service bureaus.

Budgeting: Budget review is typical of the centralization of staff and other resources within the service agencies of the Wisconsin legislature. The Fiscal Bureau facilitates the task of the appropriations committees in going over agency requests. This bureau has been effective in disseminating fiscal data provided by the Department of Adminstration for agencies controlled by the governor, and directly by independent agencies such as elements of the system of higher education.

Wisconsin was the first state (1955) to require fiscal impact statements on bills; although the statements are prepared by the executive agencies, if there is any question the Fiscal Bureau also prepares its own version. Information technology has proven helpful in the accomplishment of this task.

Post-Audit and Program Evaluation: The Legislative Audit Bureau, with a large (40 profesionals) staff and responsible to the a Joint Committee on Audit, plays a major role in the monitoring of agency spending and, perhaps more importantly, in evaluating program performance. In addition to acccumulating large amounts of fiscal data, the legislature now feels competent to require agencies to submit implementation plans for new programs to the Audit Bureau and to the standing committees with jurisdiction prior to being put into effect. Thus, a substantive review of agency plans is conducted before administrative implementation. The use of ADP has enabled the staff of the Audit Bureau to achieve more effectively the legislative goal of close monitoring of agency actions, especially when new programs are approved.

For continuing programs, the audit and evaluation processes have undergone considerable change, especially since 1981 when an automated auditing system was implemented. Previously, agency auditing involved a random review of agency records plus occasional examination of particular vouchers. The automation of agency-compiled data along with the introduction of a

standardized accounting system now allows for complete annual audits of all agencies and programs. This in turn has allowed for a considerable shift in staff duties to the potentially more important task of program evaluation and analysis although there was some concern voiced about whether legislators realized yet that this additonal data on agency program results are more valuable than traditional audit information on the legality of expenditures.

Rules and Regulations: Wisconsin is one of 25 states where computer-assisted promulgation of agency rules in a periodic register occurs. This legislatively sponsored and controlled service is free to eligible public users and, at a subscription price, to others (NASS/ACRC, 1983: 103). Telecommunications technology has been instrumental in compressing the time between rule promulgation and notification of those who may be affected by the rules; the service was originally published bi-weekly but in recent years electronically transmitted text data allows for a weekly publication cycle. Even with this reduction in notification lag, the Wisconsin Register appears quite modest in scope and content for a state of this size, perhaps a result of the legislature's earlier casual attitude regarding continued improvements in data management.

The Administrative Rules Clearinghouse, which is accountable to a Joint Committee for Review of Administrative Rules, is the repository for the information on proposed rules. The Joint Committee has temporary suspension powers over proposed rules. The systematic and now more timely notification of those being regulated no doubt makes the Wisconsin legislature a more reponsive body.

MINNESOTA

Two words used by our interviewees to describe information technology in Minnesota were "groping" and "coping." The legislature is highly fragmented or, as one representative put it, "we have more decentralization than is good for us." Recently efforts have begun by both houses to make some sense out of what the state has and where it is going with its computers.

The House of Representatives, in 1980, set up a Task Force on Information Systems to develop a plan for the further computerization of the chamber. Word processors and computers were to be acquired and deployed in a more orderly fashion. A major move was the employment of a coordinator for House Information Systems and Data Processing. The work is going rather slowly, with resistance or least a lack of enthusiasm from established centers of power. The decison to hire a coordinator was seen by some representatives and their staff as a threat.

A counterpart committee was set up by the Senate in 1983. The Senate Data Information Committee is studying the needs of that chamber. The goal is a long-range policy on computer use to put an end to the current fragemented operation. Some Senate staff expressed reservations about the committee's authority to approve the purchase of hardware, indicating that this was something of an obstacle.

In addition to the two committees, a project designed to catalog existing data systems in the state was begun in March 1984 by the Legislative Reference Lirbary. A data system was defined as a relatively stable information system. This effort came about after the legislature had expressed concern about the microcomputer explosion. The project is collecting data on all existing

systems in state offices in the Twin Cities area and it is anticipated that from 400 to 800 systems will be found. The legislature, by this move, did not want to impose a standard system on the state, but rather provide a way to facilitate greater cooperation among information users.

Most staff members said that legislative oversight was a major concern but so far little had been done in a systematic way, with or without computers, to enhance the capability for oversight. Oversight is more a result of personal contacts between legislators and their staff with state agencies. There would seem to be a tendency to behave in the "fire-alarm" mode--the irregularities in state government are revealed in some way and then the machinery of oversight goes into action. The legislators are more interested in solving problems related to visible and identifiable issues than in putting oversight on a routine basis. It was not anticipated by anyone we contacted that this general attitude was going to change because of information technology.

This reactive pattern of oversight may be the result of what appears to be a great deal of trust between the legislature and the executive branch. Almost all respondents expressed a high degree of confidence in the reliability of state data and there was little concern about creating an independent source of information. In acquiring their hardware, the staff makes sure that it is compatible with the major state systems. The most important state data base is the Biennial Budget System, derived from the Statewide Accounting System. This system provides to legislators information on dollar expenditures for the past two years and the current year, number of personnel, and a narrative on programs, including effectiveness indicators, for all state agencies. Data bases in the Land Management Division of the Department of Planning, the Department of Education, the Department of Revenue, and the University of Minnesota were also mentioned as valuable

information sources for the legislature. Substantive committees, such as Education, also make use of these executive branch resources.

Budgeting: Staffs of both the House and Senate make use of microcomputers (Apple and IBM) to develop data bases for appropriations decisions. However, no real changes in the process of budget analysis were reported. Whatever oversight exists in budget making is more through face-to-face contacts with the people in state agencies. No program review is done in either house.

Post-Audit: The legislative auditor, a statutory officer, conducts statewide financial compliance audits on a three-year cycle. The office uses the state's central IBM mainframe. There are also about 20 microcomputers (IBM, Texas Instruments, Hewlet-Packard), some of which are portable for use by auditors in the field. The preferred ratio of microcomputer to auditor is 4:1. Improved technology has been very important in the work of the office since it provides more timely data and makes possible new types of analysis. The auditor now has the capacity to generate independent data. More so than other units of the Minnesota legislature, the auditor has stressed independence of executive branch data and ADP has helped to implement this philosophy.

The office is regarded as a major instrument of oversight. Program evaluation is done through a project selection process, in which the auditor generate topics of interest and the Legislative Audit Committee, a joint committee, selects from this list the areas for further scrutiny.

Program Evaluation: Outside the auditor's office, most programmatic research takes place in the Senate Legal and Research Office and the House Research Department. IBM PCs are used to prepare responses to requests from legislators. The approach is reactive, although there was a feeling among the

staff that they should be more proactive. Neither research arm of the legislature has developed independent data bases and both seem satisfied with the information available from state agencies.

Rules and Regulations: A joint committee, the Legislative Commission to Review Administrative Rules, was created in 1974 to review complaints brought to it by legislators, interested groups and concerned citizens about "rule-related problems." The Commission can make a number of decisions about the complaint, including suspension of the rule. No special information technology is involved in this process.

FLORIDA

In 1973, the Florida legislature adopted a comprehensive five year plan for the acquisition and operation of a computer-based information system for improved legislative performance. For the ten years prior to this decision, the legislature relied on the executive branch's computer services for bill tracking and similar internal functions. A growing need for computer services, made more severe by the heavy demands while the legislature was in session, placed a great burden on the executive branch system and so the legislature decided to set up its own system. The ADP capacity of the legislature is not only sufficient for its own purposes but also supplies a variety of services to certain executive and judicial branch offices on a contract basis.

With the acquisition of its own computer system the legislature provided for a centralized orgainzational structure to control its management. The authority for control is vested with a Joint Legislative Management Committee composed of leaders from both houses plus three appointees from each chamber selected by these same leaders. The JLMC supervises five service divisions including the Systems and Data Processing Division where the computer system is housed. The use of ADP is primarily devoted to the needs of the other four divisions (Administrative Services, Library, Statutory Revision, and Legislative Information) although in recent years the standing committees, especially those responsible for fiscal or oversight matters, have received similar services from the S&DPD since they too have been generating statistical, survey, and demographic data which can be collected, transmitted, and analyzed more efficiently by automated systems. Thus, the service

divisions and the standing committees are the only legislative users currently on-line for computer services.

Budgeting: The most substantial use of information technology by the Florida legislature in oversight activities comes during the annual budget review and appropriations process. The standardized accounting-management system (SAMS), which allows for comparative assessment of agency requests, was first developed by the legislature in the mid-1970s for a few agencies, and then after a period of steady expansion, it was eventually adopted by the executive branch in the 1980s for all agencies. The legislature also requires that agency requests be simultaneously submitted to both the governor and the legislature in order to facilitate the preparation of a legislative budget. Finally, the automation of fiscal data has led to a legislatively developed projection of annual economic indicators which, after legislative authentication, all executive agencies are required to use as a trend line in annual budget requests. The cost of this service is shared by all users and has apparently eliminated the confusion present when competing public officials generate their own economic predictors.

Post-Audit and Program Evaluation: The Florida legislature has its own post-audit officer and the fiscal data alluded to above is shared with that office for greater accountability. Program evaluation is jointly shared and exercised by standing committes of jurisdiction and the House Government Operations Committee. One innovative step has been the codification of information stemming from agency surveys (questionnaires, interviews, etc.) conducted by committee staffs; this approach was evidently effective in preparing the passage of a comprehensive executive reorganization act as the survey results provided clarification of agency lines of responsbility as well as measures of performance for assessment.

Rules and Reuglation: THe automation of the administrative rules approval process has facilitated, under legislative authority, the issuance of a periodic register (Florida Administrative Weekly), which circulates to more subscribers than thoe of other states of similar size save one. Prior to the mid-1970s, proposed agency rules were entered manually on ledger cards and filed for future use; currently, some 5,000 new rules are promulgated annually and given the time constraint (90 days) for ultimate legislative reaction, automation is essential if any significant legislative response to proposed rules is to be made.

Finally, automated text processing of proposed agency rules has reduced significantly notification time to affected parties; this has allowed for improved oversight given the increasing number of citizen/affected party responses.

Administrative Behavior: THe use of a legislatively approved set of economic indicators has been instrumental in the successful operation of the Office of Public Counsel in reviewing utility rate increases. This citizens advocate, controlled by the legislature, has been able, through tracking data on previous rate change proposals, to bring an early and substantial legislative involvement to a volatile policy area where expertise is essential if the public interest is to be effectively represented. The legislature has been heavily involved despite the fact that the ultimate control over rate increases rests with an independent regulatory body. The Public Counsel relies on data submitted to the agency by utility and insurance companies plus some data generated in-house. Because of the scope and number of rate change requests, computerized data are of "increasing importance" to the Public Counsel.

WASHINGTON

The state of Washington engages in routine oversight as the functional component of sunset legislation. In addition, oversight is exercised on a regular basis as part of the budgetary process in the state. Sunset review is conducted by the legislative auditor, while budgetary oversight is the responsbility of the Legislative Evaluation and Accountability Program staff.

Both oversight activities actively use electronic data processing to assist the staff in preparing reports. Washington was a pioneer state in using ADP, beginning with econometric modeling for revenue forecasting using data processing capabilities in 1973. The Legislative Evaluation and Accountability Program (LEAP) was the product of a consulting project the state commissioned in 1974. Computer support to the House and Senate Ways & Means committees began in January, 1975. The initial use of computer support was limited to budget analysis, but the use of the system has expanded tremendously since 1975.

The data processing system has grown to include several IBM personal computers with large memories, two of which are equipped to handle word processing. Through LEAP, the staffs of the two Ways & Means Committees have access to the PCs, as well as to the mainframe (also IBM). There are four auditor work stations equipped with PC's, including one station with access to any data bank in the state, including that generated by the LEAP.

Oversight in Washington is of two principal types--budget and performance auditing. Both types are concentrated in key legislative committees, the Budget Committee and the Ways & Means Committees, respectively. Other members of the legislature are not too concerned with oversight. One respondent said they are no different than the legislators studied by the Eagleton Institute (Rosenthal, 1981), in that individual legislators are much

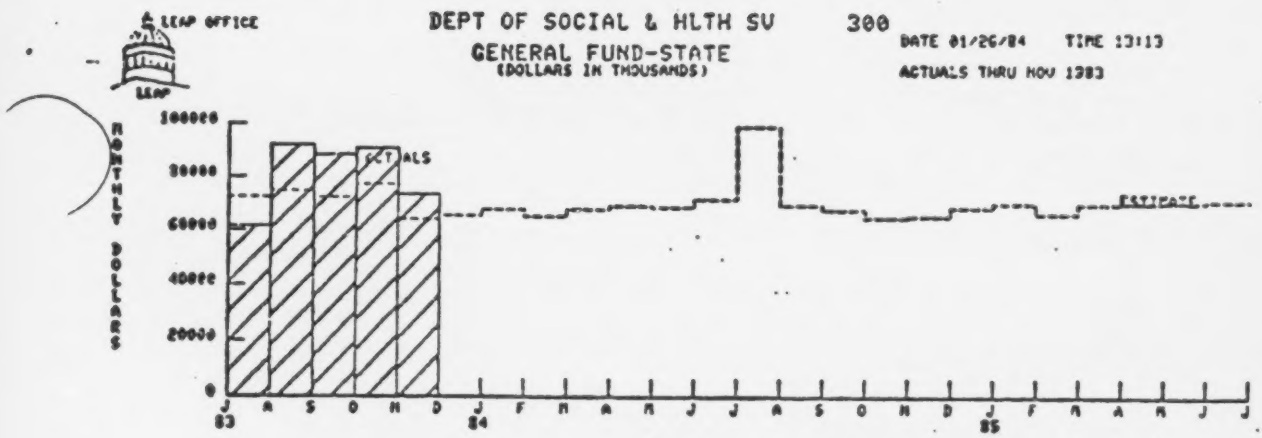
more concerned with constituency services than with general oversight, and they see little electoral payoff from oversight activities.

Most oversight takes place either as a result of scheduled sunset review or as part of the budgetary process. The LEAP committee, for example, prepares variance analysis and trend analysis of expenditure patterns versus legislative assumptions for use by legislative committees. The legislative auditor is responsible for preparing performance audits for review by the Legislative Budget Committee. Those audits are scheduled well in advance, being completed as sunset reviews. Ten to twenty reviews are completed each year, and the current schedule specifies reviews through 1992. Other legislative committees may become involved in oversight activities as necessary in developing and reviewing specific programs.

Budgeting: The system used in reviewing and analyzing budget data by LEAP was developed by and is leased from the Boeing Company. It uses monthly expenditure data generated from the governor's budget office. Current estimates and estimates of expenditures for the balance of the fiscal year are developed by LEAP staff and included in the analysis. More than expenditures are entered as data--work load data and unit cost data are also included. The principal analysis performed with the data is to plot trends in expenditures and examine variations in the budget. Thus, actual and estimated expenditures are compared with budgeted expenditures.

The resulting analysis will provide legislators with summary findings that quickly identify variations from the budget for each agency. Using spreadsheet software (Lotus 1-2-3) and the special software developed by Boeing enables staff to present fiscal data in graphic form to legislators. An example of such graphics is attached (Figure 1). This packaging enables comparative analysis not common in legislative deliberations. Most of this

FIGURE 1



		ESTIMATE	ACTUAL	VARIANCE	CUM EST	CUM ACT	CUM VAR
1983	JUL	72451	61473	(10978)	72451	61473	(10978)
	AUG	74644	91984	17340	147095	153457	6362
	SEP	72189	88235	16046	219284	241691	22408
	OCT	77135	90678	13543	296418	332370	35951
	NOV	64048	73316	9268	360467	405685	45219
	DEC	65339			425806		
	JAN	67714			493520		
	FEB	65879			559399		
	MAR	67716			627115		
	APR	68135			695249		
	MAY	68484			763733		
	JUN	71468			835202		
1984	JUL	68671			903873		
	AUG	69271			973144		
	SEP	67520			1040664		
	OCT	64564			1105229		
	NOV	65088			1170316		
	DEC	68291			1238607		
	JAN	70021			1308629		
	FEB	66239			1374868		
	MAR	69849			1444717		
	APR	73208			1517925		
	MAY	70459			1588384		
	JUN	71089			1659473		

work to date has used expenditure data, usually data generated by the executive branch accountants. These data are generally reliable, with reliability improving with higher levels of aggregation (meaning both in terms of agency versus specific program and in terms of several months at a time rather than single months).

LEAP staff are looking to improve this oversight program by incorporating more workload data into the analysis. Of particular interest is working toward some means of analyzing actual service delivery as related to budget allocations. Some of this analysis is being done now with entitlement programs and correction programs, as well as in education. However, the objective is to perform workload analysis for general comparative purposes.

The Legislative Budget Committee will occasionally commission special studies to be carried out under the authority of the Legislative Auditor. These studies are designed to find additional means of saving money through management improvement in Washington government. For example, an April 1984 report was conducted under the provisions of statutes which "provide that the Legislative Budget Committee shall conduct management surveys of public agencies, including comprehensive performance audits to ensure that agency programs are being conducted in accordance with legislative intent and established program goals and objectives" (Special Study, April, 1984). This particular report was titled "Administration (non-formula funded -093) for Plant Operations and Maintenance --Four Year Higher Education Institutions." The intent of the study was to provide comprehensive information "for use in making future legislative determinations concerning the funding of administration costs for plant operations and maintenance at four year higher education institutions."

In preparing the report, the management auditor responsible reviewed

documentation furnished by each educational institution in response to specific questions. The recommendation generated by the report was to consolidate the administration of the six institutions. Thanks in no small part to advanced information technology the report includes detailed budget data for each institution, and the information is presented in spreadsheet format.

Other reports have provided useful suggestions to legislators concerning budget decisions. The 1981-1983 Biennial report of the Legislative Budget Committee (December, 1982) highlights many of these suggestions. Among them was a suggestion to save money by having higher education institutions purchase their insurance through the State. One investigation found that the Department of Transportation had paid salaries to an employee while he was teaching for a private association (unpermitted moonlighting), for a total of $3,204.88.

Post-Audit: The performance audit function was assigned to the legislative auditor in approximately 1974, with sunset legislation being adopted in 1977. The function is now a routine one, both for the 10 to 20 scheduled reviews each year and for the sporadic requests that result from particular problems.

The legislative audit staff gathers whatever information is appropriate for a particular audit. This information of course includes that which is available through the specific executive agency involved in the program. The executive-generated data is rated as generally pretty good, with some exceptions. The exceptions are viewed as part of a tendency by the agency to "put the best foot forward," and not as attempts to change data. Improved technology has had a positive impact on the quality of information by enabling easier identification of errors in reported data. Work load data is

also a concern of the auditor, and more such data is being generated (it is labeled "budget drivers").

Technological improvements have also been important in expanding the data bases used in auditing. For example, auditors now conduct their own surveys of program users, and ADP capabilities enable quick and reliable analysis of the survey results. Such a survey was used recently when a sunset review was conducted on the Arts Commission. Further, technology has increased the productivity of the auditing staff. At a minimum, word processing has improved productivity by reducing the amount of key stroking (rough drafts done on word processors need not be typed from scratch by the secretarial staff). At a maximum, productivity has increased because data analysis can be performed more rapidly and more thoroughly.

In order to interpret raw data and prepare sunset reports, the auditor uses data generating software (dBase) and spreadsheet software (Lotus 1-2-3). The state does not use social science statistical software at the present time, but doing so is one area of improvement targeted by the auditor. Reports generated by the auditor and disseminated through the Legislative Budget Committee are generally well received by others in and out of government. The committee has an established reputation for objectivity, fairness, and bipartisanship. From what can be learned about Washington performance audits, all the actors involved receive them as working documents to assist in program delivery, not as threats to program survival.

In preparing a report on the effectiveness of the Treatment Alternatives to Street Crime (TASC) program in two counties, the auditor was able to analyze existing information for the purpose of determining the cost effectivness of the TASC programs as an alternative to state incarceration. The number of man-years of incarceration avoided was calculated on the basis

of the total number of individuals avoiding state incarceration, for a total of 127 man-years avoided. From this number it was possible to calculate dollar savings, determined to be just under $2,000,000 in FY 1982. Since the costs of the programs during the year were $810,000, savings exceeded a 2 to 1 ratio when compared with costs (Legislative Budget Committee, January, 1983). The increased capacity for such analysis thanks to information technology cannot be underestimated.

Sunset review in Washington is a thorough process, designed to examine any problem areas in a particular program. For example, this is the stated purpose of the 1983 review of the State Board of Pharmacy: "The purpose of the review was to determine the utility, efficiency and effectiveness of the State Board of Pharmacy as an entity in State government. Consistent with generally accepted government auditing procedures, this is largely an exception report. Therefore many of the accomplishments of the State Board of Pharmacy which relfect favorably on the Board and its staff may not have been included" (Legislative Budget Committee, December 16, 1983). This particular sunset review also illustrates the use of independently gathered information by the auditor's staff: "The review included mail surveys of a sample of each major category of Board of Pharmacy licensees and a mail survey of 400 licensed drivers in Washington." Personal interviews were also conducted with Board members, related government agencies, State Representatives, lobbyists, legislative staff, health professionals and state agency staff in Washington, Wisconsin and New York. While survey results did yield ordinal level data, the staff did not use that data for purposes other than displaying frequencies for each question (effects of repealing regulatory statutes could be very significant, moderately significant, slightly significant, or not at all significant). Some more sophisticated statistical

analysis (testing by correlation for the types of business and/or consumers most significantly affected) should be a next step for Washington auditors.

Program Evaluation: Program evaluation in Washington is another function of the Legislative Auditor, supervised by the Legislative Budget Committee. Evaluations are requested by the legislature and conducted by the auditor. For example, in 1983 the State Appropriations Act included a request for a performance audit of the common school preschool handicapped program. A management auditor on the staff of the Legislative Budget Committee conducted the research and wrote the report, using as data "interviews, budget and program data developed by surveys and other methods, and the statutes and program rules" (Legislative Budget Committee, August, 1984). The assistance provided by information technology is quite obvious in this report, including the presentation of a computer-generated graph to display the growth in enrollment of preschool handicapped children (Figure 2). Spreadsheet software was obviously useful in generating a handicapped/special ed model, seen in Figure 3.

Evaluation can sometimes be a more routine activity, as when a particular program is evaluated frequently to monitor progress. Such is the case with the educational clinics, evaluated for the third time in 1983 (Legislative Budget Committee, March, 1983). In this example, clinics contracting with the state are evaluated every two years. Once again, the role of information technology is obvious in the report, including another use of spreadsheet software to generate a ranking of performance for each clinic evaluated. This particular evaluation is loaded with statistical analysis dealing with cost per pupil and performance of the students after attending the clinics.

Rules and Regulations: Review of rules and regulations is integrated into

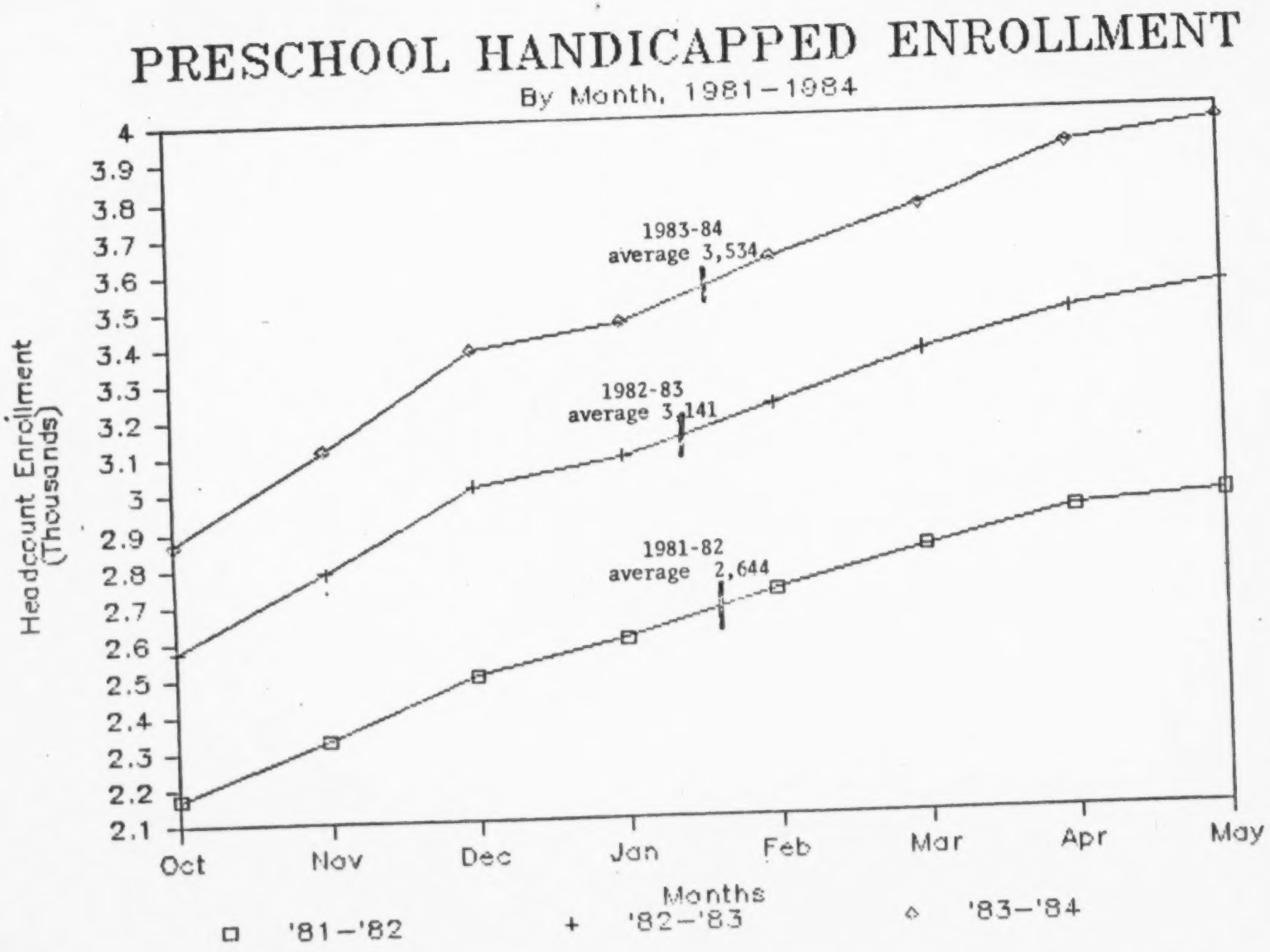

PRESCHOOL HANDICAPPED ENROLLMENT
By Month, 1981-1984
Headcount Enrollment (Thousands)
4
3.9
3.8
3.7
3.6
3.5
3.4
3.3
3.2
3.1
3
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
1983-84
average 3,534
1982-83
average 3,141
1981-82
average 2,644
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Months
'81-'82
'82-'83
'83-'84

FIGURE 2

FIGURE 3

17-Aug-83
THIS IS THE HANDICAPPED/SPECIAL ED MODEL

MODEL INCLUDES ADJUSTMENT
TO FULL COST. REQUIRES
INCREASING THE CERT &CLASS RATIOS
TO REFLECT ELIMINATION OF BEA
CALC

SPECIAL EDUC MODEL 83-85 BIENNIUM/HOUSE BUDGET

ASSUMPTIONS	FY 84	FY 85		
PROG 21 CERT SALARY	26720	27085		
PROG 21 CLASS SALARY	17002	17032		
HOME HOSPITAL	0	0		
MERC-PROG21/FTE	600	631		
EXCESS CARRYFORWARD	0	-NA-		
BEA CARRYFORWARD	0	-NA-	SSF	682244.18
FEDERAL	0	-NA-		

SPECIAL EDUC MODEL 83-85 BIENNIUM/HOUSE BUDGET
FORMULA UNIT WORKSHEET (1ST YEAR)

	TOTAL	A		B		C		D	
1. PRESCHOOL HANDICAPPED	100	0.20	20	0.30	30	0.40	40	0.10	10
2. SERIOUSLY BEHAVIORALLY DISABLED	0	0.20	0	0.29	0	0.44	0	0.07	0
3. ORTHOPEDICALLY IMPAIRED	0	0.44	0	0.29	0	0.25	0	0.02	0
4. HEALTH IMPAIRED (N.I.)	0	0.20	0	0.28	0	0.48	0	0.04	0
5. SPECIFIC LEARNING DISABLED	0	0.01	0	0.09	0	0.72	0	0.18	0
6. MENTALLY RETARDED/MILD	0	0.14	0	0.27	0	0.59	0	////////	
7. MENTALLY RETARDED/MODERATE	0	0.51	0	0.25	0	0.24	0	////////	
8. MENTALLY RETARDED/SEVERE	0	0.79	0	0.21	0	////////		////////	
9. MULTIHANDICAPPED	0	0.92	0	0.05	0	0.03	0	////////	
10. DEAF	0	0.65	0	0.24	0	0.10	0	0.01	0
11. HEARING IMPAIRED	0	0.50	0	0.31	0	0.17	0	0.02	0
12. VISUALLY HANDICAPPED	0	0.35	0	0.19	0	0.27	0	0.19	0
13. DEAF BLIND	0	1.00	0	////////		////////		////////	
TOTAL	100		20		30		40		10
14. COMMUNICATION DISORDERED	0								

A TOTAL /	5.20	=	3.85	
B TOTAL /	10.00	=	3.00	
C TOTAL /	25.80	=	1.55	
D TOTAL /	26.90	=	0.37	
INST/THERAPY UNITS			8.77	
COMMUN DISORD TOT /	45.00	=	0.00	(CDS UNITS)
PUPIL TOTAL /	114.00	=	0.88	(ASSEM. UNITS)
I/T UNITS+CDS+ASS /	30.00	=	0.32	(ADMINISTRATION)
TOTAL CERT UNITS			9.97	
ITU(PRE) *	0.30	=	4.38	
INST/THERAPY *	0.36	=	.00	(AIDES)
ADMINISTRATION *	1.00	=	0.32	(SECRETARIES)
TOTAL CLASSIFIED			4.71	

the post audit and program evaluation functions. Specific rules and regulations are reviewed as requested, and a rigorous program of sunset review every five years provides regular oversight in this area.

Administrative Behavior: Occasionally one of the legislators may request an investigation of a particular problem, which will be handled as an oversight function by the legislative auditor. Once such case arose recently which required the auditor to investigate allegations of nonfeasance in building a bridge in Spokane. A special audit was "taken in response to a jointly signed request for an audit by eight members of the Senate" (Legislative Budget Committee, September, 1984). The objectives for the report "required a review of surveying, quality control, change order and personnel procedures related to the construction of the bridge." Information technology was not important in this particular report, since most of the research required site visits and checks for compliance with engineering practices. However, information technology could well play an important role in other reviews of administrative behavior.

TEXAS

The use of ADP in the Texas legislature was expanded significantly after an internal review of the existing system conducted by the Legislative Council in 1981. The old system was a complicated operation in which equipment and data were shared by the legislature, the State Auditor, and the Department of Highways. This was replaced with a centralized system developed exclusively within the legislature. The system has been expanded sharply in the intervening years, perhaps demonstrating how ground "lost" during periods of rapid innovation by other states can be "regained," assuming that resources are available once the commitment has been made.

Within the Texas legislature, the automated information system is controlled by the Legislative Council. All legislative agencies, officers, committees, and individual members (at their option) in Austin and/or the district offices are or will be linked to the service. It seems likely that the Texas legislature will become, or already is, among the leading states in the acquisition and application of ADP; one indication of this premier position was the conference on the subject held last year that attracted representatitves from some twenty legislatures, including California, Florida, Pennsylvania, and North Carolina, all states with some degree of distinction for innovation in legislative applications of ADP.

Budgeting: Since the legislature prepares and develops the state budget, the fiscal committees, especially the appropriations committees, have evidently benefited most directly from the greatly expanded data processing system. The Legislative Budget Board has become a major user of fiscal data, especially in its evaluation of "variance" reports which the legislature now requires of executive agencies. Prior to 1981, agency fiscal data were

available only in hard copy form and LBB staffers used calucluators to review and analyze agency requests; since then, a data base consisting of over 1.5 million items for each of eleven fiscal measures has been accumulated. In furtherance of its duties, the Board relies heavily on the rapid entry and display of fiscal data to evaluate these variance reports which, if necessary, are due periodically and which are used to ensure compliance with legislative mandates. The information received in the variance reports is also shared, although only in hard copy form at the present time, with the Legislative Auditor who wields post-audit authority on behalf of the legislature. Finally, the variance reports are used, along with the more traditional indicators of agency perrformance, by the standing committes of jurisdiction since they are also entrusted with oversight responsibilities. Given the time frame (five years) for the extension of ADP to substantive committees, a variety of oversight methods will need to be used in the meantime by these units.

Rules and Regulations: The automated acquisiton and transmission of information on administrative rules in Texas now allows for the most frequent distribution (twice weekly) of a register by any state; this legislatively authorized service provides nearly 5,000 subscribers with almost instantaneous information on agency decisions; the information is also used by standing committees of jurisdiction to monitor policy implementation since agencies are required to submit proposed rule changes in advance and the relevant committees have full power to suspend proposed rules notwithstanding recent court declarations. The register includes such diverse items as interest rate ceilings and Ethics Committee opinions, all made possible through the improved information technology.

Administrative Behavior: Public access to stored data bases on agency activities is becoming a more important part of the legislative process in Texas; citizen inquiries/complaints are being electronically transmitted from remote (fifteen currently) locations. Information and data generated by this ombudsman-type citizen service is also shared where appropriate with an executive audit officer (Controller) in a reciprocal arrangement.

VIRGINIA

Most oversight activity in Virginia is conducted by the Joint Legislative Audit and Review Commission. This body staffs the following legislative activities: post audit, research and policy analysis, and oversight. Technological innovation is managed by the Joint Rules Committee, a separate body. The Division of Legislative Automated Systems staffs this committee.

The use of information technology is a new experience for Virginia; they have had their system in place for only about 3 months as of this writing. The system is a thorough one--fifty individual microcomputers are networked through a minicomputer (Wang VS 85), which in turn is linked to the mainframe computer. Each part of this network has word processing capabilities, and the link through the minicomputer to the mainframe facilitates executing more complex tasks. The fifty separate microcomputers are located in the offices of various committee staffers. Specific committees call upon their staffs to use those computers in preparing oversight reports. Oversight activities in Virginia are committee-specific, with most of them being concentrated in the Oversight and Audit Committees.

Data are made available to staffers through the computer network--the data are usually in the form of batch files which must be translated into usable data files by the staff user of the equipment. The data most commonly contain expenditure information and personnel files. Allocation formulas are also included as data files (especially as applied to schools, roads, and similar functions). Data analysis is facilitated by the use of software available to staff--Lotus 1-2-3, dBase II, word processing software, and compiler software. Access to the minicomputer also provides comprehensive office automation systems for calendaring, messaging, and word processing.

Agency data are generally considered to be quite reliable; one respondent

rated the data an 8 on 1 to 10 scale. Cooperation with the executive branch is generally quite good. In fact, the legislative staff, through the Division of Legislative Automated Systems, assists the executive branch in budget preparation. Personnel who have worked as legislative staff are often hired by executive agencies, further encouraging cooperation between the two branches. No attempt to conceal any requested data has been detected.

By using the appropriate software, data presentations in Viriginia take the form of spreadsheets, tabular analysis, and graphics. An example of graphics presentation in Virginia has been the display of turnover rates by discipline among teachers throughout the state. Spreadsheets are used for budget preparation in order to factor in expenditure data. Each agency's budget is displayed as a spreadsheet.

The history of using electronic data processing in Virginia is a short one, and one of the obvious conclusions from one respondent is that "we have a base not scratched yet." The inspiration for using ADP equipment came from the bottom up--permanent staffs expressed the desire for such equipment to the Joint Rules Committee, which in turn agreed to purchase the equipment. That committee includes 7 members from each house of the Virginia legislature, so there has been at least some explicit legislative support for using the new system. Occasionally a particular legislator may also request some further use of ADP, normally after hearing of a particular use, at regional meetings, through the National Council of State Legislatures. In sum, use of information technology for oversight activities has been limited in Virginia to this time, but the potential is in place for considerable use of expanded data bases.

Budgeting: The collection and analysis of budget data is a joint activity of the legislature and the executive. Virginia uses an executive budget

process, so most of the analysis is done by the executive branch. However, legislative staffers are prepared to conduct an independent analysis; as mentioned previously they are certainly well trained to do so. A special software package, Budget Amendment System (BAS) assists fiscal committees in the legislature as they monitor the budget amending process.

Post-Audit: The post-audit function is combined with program evaluation and both are conducted by the Joint Legislative Audit & Review Commission.

Program Evaluation: Virginia is quite active in program evaluation. This has been an area of special concern to the legislature since 1973. Some of the legislators were "infuriated" by their poor ranking in the earlier Citizens' Conference on State Legislatures report. In deciding how to respond to these criticisms, one legislator in particular (chair of the Appropriations Committee) pushed for adopting a recommendation of the report - creating a legislative staff for oversight activities. A director for the Joint Commission was hired in 1974, and after working closely with the General Accounting Office of the U. S. government, the director has developed an active program of program evluation for the state. In recent years the Commission has completed 80 major evaluations of program, agencies, and policies.

Recent evaluations completed by the Commission have included the following: the quality of education handicapped children receive while institutionalized in the state mental facility; the need for security staffing in correction facilities; the equity of the distribution of highway funds; and the success of deinstitutionalization programs. The Commission is unafraid to tackle large research projects--they just completed the second year assessment of the fiscal stress of each city and county in the state.

The Virginia legislature has a history of adopting the recommendations that result from evaluation reports--perhaps becuase of their originial indignation about being labelled such a "poor" legislature by the Citizens' Conference. Some recommendations adopted in recent legislative sessions include: the job of chief engineer in the highway department was divided into two jobs (policy and operational); the highway department deferred $9 million in equipment purchases; and changes in the composition of the state-owned vehicle fleet. The legislature is currently considering some 20 bills generated by the recent review and evaluation of the formulas for allocating the highway fund. One person labelled these bills "the most controversial set of bills ever considered in a general session."

Since information technology is so new to the state, it has not yet been used extensively in program evaluation. However, the system will be of tremendous assistance, since Virginia has included in its software collection social science statistical packages. Some analysts are already using these software packages.

Rules and Regulations: There is no systematic process for reviewing rules and regulations in Virginia. Instead, rules and regulations are "periodically subject to review."

Administrative Behavior: There is no regular process for reviewing administrative behavior.

SOUTH DAKOTA

This state cannot be counted as one of those on the cutting edge of the information revolution. The use of computers has not advanced much beyond the conventional legislative uses such as statutory retrieval, bill drafting, bill tracking, and the printing of session laws. The legislature still maintains a highly centralized staff system, with most functions under the Legislative Research Council. The substantive committees have no independent staff.

By most accounts, the legislators have an occasional interest in oversight. In this Republican state, concern with the executive branch increases when there is a Democratic governor. When both branches are controlled by the same party, there tends to be better cooperation between the two parts. There has never been so much distrust that the legislators have felt a serious need for the development of an independent source of information about the executive branch. Oversight occurs when legislators are stirred by specific incidents.

Post-Audit: The auditor general is appointed by the legislature. The incumbent was appointed in 1983 and has launched the introduction of microcomputers into the office (IBM PCs with Lotus 1-2-3 software). The computers are used in support of the fiscal compliance function. No perforamnce audits of state agencies are conducted.

Rules and Regulations: In 1972, the constitution was amended to provide for "a committee comprised of members of both houses of the Legislature, acting during recesses or between sessions, to suspend rules and regulations promulgated by any administrative department or agency from going into effect until July 1 after the Legislature convenes." The code counsel is the support

arm of the Interim Rules Committee. The office uses the bill-typing system software package ALTER (Automated Legal Text Editing and Revision) developed by Data Retrieval Corporation of America. The program is run on the state's mainframe. The proposed rules are given to the code counsel by the agencies, entered into the computer, and are then available for review by the legislators. Copies are made for members of the interim committee. In fact, the system is nothing more than the standard statutory retrieval system applied to regulations. One feature of the ALTER program permits reviewers to relate a proposed rule to the authorizing legislation.

In summary, one can safely say that information technology has not done much to change the process of legislative oversight in South Dakota. We could find little evidence that there was much dissatisfaction, either among members or the staff, over the situation. South Dakotans are not so backward that they are unaware of developments in other states; rather, because of the smallness of operations and the fairly close relations between branches, more elaborate methods of getting informatino is not seen as a high priority.

CONCLUSIONS

None of the states we surveyed are closing in rapidly on the ideal system of oversight outlined at the beginning of the paper--a centralized, comprehensive, regularized process of administrative review based on independently derived information. However, it is obvious that proximity to the ideal varies greatly among states; for example, California, New York and Washington are much closer than South Dakota. The specific direction of any further changes will depend upon the reponses the states make to the five questions we posed at the beginning.

For four of those questions, we have some fairly solid answers. For the remaining question the people to whom we talked were not the best judges about whether the legislature was interfering in administration. Texas, with its legislative budget, may be the clearest example of legislators doing traditional executive business. As for the representative nature of oversight, it is clear that only a handful of legislators are actively concerned with oversight, although most of them would say it is important.

In the matter of centralization and decentralization, the states have clearly opted for centralization, although it is is the technology rather than oversight per se that is being consolidated. Florida began with a centralized ADP system while, at the other extreme, Minnesota is still struggling to impose some order on its technology. In some states, such as California, centralization was probably demanded by the scope and complexity of the automated office system. So there is a trend toward the joint management of technology with the two houses giving up some of their independence. One cannot say if this always leads to a joint perspective by either house on the data that are generated.

Whether ADP can remain centralized, and under what conditions, however, may still be an open question. One of the results of our survey that impressed us was the rumblings of the microcomputer explosion. It is remarkable that the last comprehensive compilation of details about state information systems (Congressional Research Service, 1977) makes only passing reference to the micros. Seven years later, it was hard for us to find a legislative staff office that did not have them or was not planning to get them; only Wisconsin was making a deliberate stand against their proliferation. But in another state, one of our interviewees ended the conversation with "Say, if you are making recommendations, tell them that we need more PCs."

More hierarchical organizations might be better able to contain the procurement of personal computers but legislatures, increasingly marked by the "all-generals-and-no-privates" syndrome, may have trouble in controlling their acquisition by members. A bank of PCs in the office will probably be the mark of the thoroughly modern legislator, even if they are used more as bookends than as technology. In the most positive scenario, however, the next generation of legislators, all computer literate and armed with the most advanced technology, may become quite effective individual overseers. In that case, it may be necessary to re-evaluate the criterion of centralization. Already some apsects of decentralization are clear, as in Minnneosta, where field auditors take their portable micros to the audit site, leading to greater accuracy and efficiency.

As to the legislature's concern with regularized, routine oversight, we would judge it to be limited. Washington may be the major exception. Elsewhere, there will be those occasional spasms of interest in the latest fad, such as sunset legislation, but when the solons learn that these gimmicks

do not automatically and painlessly provide the answers, they will tend to wander off to other matters. Whether it is faulty bridge construction in Washington, management practices in the Minnesota Department of Revenue, or the length of the duck-hunting season in South Dakota, legislators are likely to invest their precious time in efforts which are vital to the their constituents or their careers and which, not so incidentally, will get them some publicity. Oversight will remain a particularlistic activity, regardless of the technology involved.

Finally, it seems clear that the legislators were not anxious to create an independent body of information. We did not find, in most cases, so much hostitilty betwen the two branches that executive data were always suspect. Most staff people found agency data to be reliable and meaningful; the major complaint about executive branch information was that there was just too much of it. The states also seem to be interested in insuring that legislative and executive information systems do not become incompatible. In this regard, New York is not in total agreement with the other eight states; perhaps this has something to do with the state's large and experienced staff. We also found, in a quick preliminary interview, that Iowa's legislative leadership is committed to an ADP system independent of the governor.

In sum, the states are not moving directly toward our ideal form of legislative oversight. This may mean that our model demands too much of political actors. It may also be a function of the way in which information techonology has been introduced into the legislative process. We turn now to that question.

The Introduction of Information Technology

Our selection of states for study was guided by the desire to find out

whether the direction and velocity of the use of information technology in oversight could be called the result of deliberate policy decisions by legislative leadership. Based on our survey, we certainly cannot say that there is anywhere a thoughtful legislative masterplan for greater oversight, augmented by the most modern means of information processing. Information technology has not been seized upon by the leadership as a major weapon in the ongoing struggle with the executive branch. One suspects that much of the technology discussed above would have been put in place in about the same way if oversight had never been mentioned. There may be great oversight potential but the nature of the function has not been revolutionized so far.

That the states we identified as more administratively sophisticated are also well advanced in the application of technology need not be explained by elaborate arguments about political sensibilities. Almost by definition, administrative sophistication means the state will be more receptive to changes in technology. Our findings about state government conform to what Perry and Kraemer (1979: 101) wrote about local government, namely: "the general level of professionalism of the organization and the status of its technological development is much more important in the allocation of resources to technological innovation than the supportiveness of the chief executive or the receptivity of elected officials and department heads." The level of professionalism of the legislative staff seems a good indicator of the application of information technology.

Or perhaps we are talking about a coterie of the cognoscenti who move freely back and forth between branches. We found in some states (e.g. California and Virginia) a pattern of personnel transferring from the legislature to the executive and vice versa. These mobile profesionals seem to have been the inspiration of some innovation in both branches. Their

confidence in one another may also account for the legislature's reluctance to form independent sources of information.

But these profesionals, whether or not categorized as "whiz kids," cannot take the legislature faster than it is willing to go. Here we can return to Stucker's description of the pattern of technology introduction. It is true that the legislators familiarized themselves with the housekeeping potential of ADP before they ventured into more complicated areas. In a phone conversation with Mr. Carl Vorlander of the National Association of State Information Systems, we confirmed that, in general, the legislative use of ADP for internal administrative purposes is fairly high while applications aimed at oversight are less frequent.

How rapidly can we expect future changes toward more oversight applications to occur? Wissel, et. al. (1976: 259) argue that a legislature's search for more information is incremental and that legislators tend to "propose limited reforms which build on or supplement existing facilities." Relying on the far more extensive data on information technology in local governments, King (1982) suggests that there is a 10-year lag between the introduction and widespread acceptance of new information technologies. These findings imply that information technology in legislatures will grow at a slow but steady rate. Our survey at least hints at an alternative projection. It is probably unlikely that South Dakota will make a Great Leap Forward to a system that would dazzle the Californians. That small state still has a way to go in building up the critical means of professional commitment and legislator familiarity necessary for extensive technology utilization. However, among those states which have attained a certain plateau there may be a greater tendency to make major changes in their technology. Wisconsin was once the model for other states, but personnel

there feel they have been leapfrogged by Iowa and California which were able to institute more advanced systems almost overnight. Virginia may be another state that will soon surpass the capabilities of states which were among the first to adopt information technology. Given the Virginia legislature's concern for becoming more professional (as measured by the criteria of the Citizens Conference) and their commitment to evaluation as one means of asserting themselves, we can anticipate increasing use of their newly installed computer system, which is an extensive one.

As King (1982: 25) found, "the largest wealthiest, most professional and most technologically advanced governments will be in the forefront of future adaptations of information technology. This would appear to be the case among state legislatures as well. At the same time, the experiments conducted by the leaders in technology are there for the less advanced states to follow, if they have the will and the dollars.

Present Applicaitons of Technology in Oversight

Whaterver the future may be, we found little eivdence that current uses of information technology were part of an overall response of the legislature to the executive, either to regain lost power or to fight off challenges from the governor and agencies. Oversight activity still takes place in its traditional forms; Table 2 summarizes the impact of information technology in the five basic oversight categories. The evaluation of the usage as "high," "medium," or "low" is admittedly very subjective, but the table may give some indication of where legislatures are currently located.

Table 2

IMPACT OF INFORMATION TECHNOLOGY IN DIFFERENT OVERSIGHT CATEGORIES

	Budgeting	Post-Audit	Program Evaluation	Rules and Regulations	Administrative Behavior
California	high	medium	medium	n/a	low
New York	high	medium	medium	medium	n/a
Wisconsin	medium	high	high	medium	low
Minnesota	medium	high	high	medium	low
Washington	low	high	high	n/a	n/a
Florida	high	high	high	high	medium
Texas	medium	low	medium	high	low
Virginia	high	high	high	high	medium
South Dakota	low	medium	low	medium	low

From Table 2 we can see that the greatest impact of information technology has been in the areas of budgeting, post-auditing,and program evaluation. This is to be expected since the practitioners in these areas, both in the legislature and the executive, are probably most familiar with new technology and have the professional skill and interest to deal with huge amounts of data, usually in the form of dollars. Now, having said that the impact is real, we must go beyond to inquire whether the final outcome of decisions is any different. In some states, such as New York and Washington, the legislative staff obviously feels they have a better handle on the operation of state government. In California, using a system based on Washington's LEAP system, the staff has found the most advanced applications of information technology to be less than indispensable.

Our overall conclusion then is that information technology has not so far

changed the fundamental nature of oversight nor has oversight been revolutionalized by the nature of information technology. At the same time, the changes that have taken place were necessary if the oversight function was not to be rendered increasingly obsolete. A legislature trying to keep track of billion-dollar budgets or five thousand administrative rules changes a year with paper and pencils would be a hopeless spectacle. Legislators can see that they at least have to keep pace with the information technology of the executive.

To say, however, that information technology has had an impact still begs the question of whether oversight is being taken to a new and higher plane. Reconsider, for example, two of the most popular areas of oversight. If there has been an oversight renaissance in the past decade, it is surely in the area of administrative rules review. From our analysis of the comments of legislators across the country this is seen as the best method for coming to grips with the bureaucracy. Of course, technology has little to do with this development. Computers do make the work of codifying and retrieving regulations faster and less tedious, but the essential idea of rules review could be implemented given more clerks at Underwood manual typewriters.

Budget review is the oldest form of oversight and one which has been heavily computerized. All this activity, however, may hide some basic questions about budgeting in general. To claim that the budget system has been modernized by computers presupposes the existence of such a system, of a coherent method whereby rational people can make careful choices about optimal expenditure patterns. That there is such a thing has not been proved. The computers may form one more elegant hoop through which agency heads must jump before final decisons are made in the familiar incremental manner. For those who believe that the agonies of budgeting are rituals designed to convince

ourselves that somebody is in control, then the flashy machinery may be seen as part of the pomp and circumstance of a secular age. The new priests can now say, "We must know what we're doing. We have a computer program." But is there any technology, however powerful, that could make sense out of the trillion or so dollars in the federal budget? Or worse, if it did make sense, could we tolerate it? In short, an on-line, real-time, user-friendly, ADPed budget may not change much the eternal verities of wheeling and dealing as legislators try to answer the essential political question: who gets what?

The Future

At the end, our conclusions may be somewhat disappointing for anyone who wants to see autonomous legislative policy makers boldly constructing ever more vital political institutions. But it is far too early to despair. The one common thread running through our interviews was comments such as "We are just beginning...," "We are in transition right now...," or "We have these plans..." Glenn Newkirk even warned us that surveys of ADP usage are useless since things are changing so rapidly that the inventory is obsolete before it is finished. The situation is in flux and the major actors are still learning. The states which have done the most work have put together the core staff personnel. Now systematic attention must be given to what the legislators really want. Our respondents said that oversight was an important topic even if legislators did not always know what to do. In some cases, staff members suggested that the members were not really prepared to digest all the information that was now available to them.

The next step in overesight reform, we suggest, is for the legislators themselves to put the issue high on their agenda. The staffs have done as much as they can. A leadership core of legislators in each state will have to

figure out what can reasonably be expected of their committees and individual members in handling greater information. The current more or less haphazard approach has brought most legislatures to a point where that next step seems feasible. Without it, the system will be overwhelmed by meaningless data and the executive agencies will gain a significant advantage in escaping outside control. If nothing else, legislatures should begin a process of self-assessment so that members can at least discuss the groundrules of oversight in an information-rich society. Illinois evidently did this a few years ago and while nothing like an official manual for oversight was produced, the results there provide a basis for further consideration of oversight improvement (Nowlan and Merritt, 1982). Other states should follow this example.

In conclusion, we think the states have responded well to the challenge of information technology, but that this initial reponse will not be enough to ensure the viability of representative bodies over the long haul. There is nothing to indicate that legislators could not make greater efforts to design a better system of oversight with the information technology now available to them. One hopes that once they have mastered the fundamentals of ADP, the legislators will have the confidence to fashion a system that can enable them to take greater advantage of this new technology.

APPENDIX

Much of the information in this report was derived from telephone interviews with representatives of the following organizations:

General: Administrative Codes and Registers Committee, National Association of Secretaries of State, Springfield, Illinois.

Information Services Division, National Conference of State Legislatures, Denver, Colorado.

National Association of State Information Systems, Council of State Governments, Lexington, Kentucky.

Legislative Management, National Conference of State Legislatures, Denver, Colorado.

Legislative Automated Systems, North Carolina Legislature, Raliegh.

California: Assembly Office of Research
Senate Office of Research
Data Processing Division, Office of Legislative Counsel
Office of Legislative Analyst
Senate Finance Committee
Department of Finance
Office of Administrative Law
Assembly Rules Committee
Auditor General

Florida: Systems and Data FProcessing Division, Joint Legislative Management Committee
Joint Administrative Procedures Committee
Public Counsel

Minnesota: Legislative Reference Library, Legislative Coordinating Commission
House Information Systems and Data Processing
Office of the Secretary of the Senate
Senate Legal and Research Office
House Research Departemnt
Senate Governmental Operations Committee
House Governmental Operations Committee
House Task Force on Information Systems
Legislative Commission to Review Administrative Rules
House Rules Committee
Revisor fo Statutes
Seante Index Department
Senate Legislative Fiscal Analysts
House Apprpriations Committee
State EDP Administration

New York: Legislative Commission on Expenditure Review
Administrative Regulations Review Commission

South Dakota: Auditor General
Code Counsel
Legislative Research Council
State Bureau of Administration

Texas: Data Processing Division, Legislative Council
Computer Services, Legislative Council
Legislative Budget Board

Washington: Legislative Evaluation and Accountibility Program
Legislative Auditor

Wisconsin: Office of the Clerk of the Senate
Program Evaluation Division, Legislative Audit Bureau

Virginia: Division of Legislative Automated Systems
Joint Legislative Audit and Review Commission

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